



September 19, 2016

Tom Moe USS Corporation P.O. Box 417 8771 Park Ridge Dr Mountain Iron, MN 55768

RE: Project: NPDES-Line 3 Wkly Pace Project No.: 1274857

Dear Tom Moe:

Enclosed are the analytical results for sample(s) received by the laboratory on September 14, 2016. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Melisa M Woods

Massia Wirds

melisa.woods@pacelabs.com

Project Manager

Enclosures

cc: Cory Hertling Terri Sabetti, NTS





Pace Analytical www.pacelabs.com

315 Chestnut Street Virginia, MN 55792 (218) 742-1042

CERTIFICATIONS

Project: NPDES-Line 3 Wkly

Pace Project No.: 1274857

Virginia Minnesota Certification ID's

315 Chestnut Street, Virginia, MN 55792

Alaska Certification #MN01084

Arizona Department of Health Certification #AZ0785

Minnesota Dept of Health Certification #: 027-137-445

North Dakota Certification: # R-203

Wisconsin DNR Certification #: 998027470 WA Department of Ecology Lab ID# C1007

Nevada DNR #MN010842015-1

Oklahoma Department of Environmental Quality





SAMPLE SUMMARY

Project: NPDES-Line 3 Wkly

Pace Project No.: 1274857

Lab ID	Sample ID	Matrix	Date Collected	Date Received
1274857001	WS-002 Scrubber Make-Up	Water	09/14/16 08:50	09/14/16 17:35
1274857002	WS-003 Thickner Overflow	Water	09/14/16 08:40	09/14/16 17:35

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SAMPLE ANALYTE COUNT

Project: NPDES-Line 3 Wkly

Pace Project No.: 1274857

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
1274857001	WS-002 Scrubber Make-Up	EPA 200.7	MAR	3	PASI-V
		EPA 300.0	CSD	1	PASI-V
1274857002	WS-003 Thickner Overflow	EPA 200.7	MAR	3	PASI-V
		EPA 300.0	CSD	1	PASI-V



ANALYTICAL RESULTS

Project: NPDES-Line 3 Wkly

Pace Project No.: 1274857

Date: 09/19/2016 04:42 PM

Sample: WS-002 Scrubber Mak	e-Up Lab ID:	1274857001	Collected	d: 09/14/16	8 08:50	Received: 09/	14/16 17:35 Ma	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qua
200.7 MET ICP, Lab Filtered	Analytical	Method: EPA	200.7 Prepa	ration Meth	od: EP/	A 200.7			
Calcium, Dissolved	104	mg/L	5.0	0.29	10	09/15/16 16:57	09/16/16 13:35	7440-70-2	
Magnesium, Dissolved	208	mg/L	5.0	0.67	10	09/15/16 16:57	09/16/16 13:35	7439-95-4	
Total Hardness, Dissolved	1120	mg/L	100	50.0	10	09/15/16 16:57	09/16/16 13:35		
300.0 IC Anions 28 Days	Analytical	Method: EPA	300.0						
Sulfate	740	mg/L	20.0	10.0	10		09/15/16 23:03	14808-79-8	
Sample: WS-003 Thickner Over	rflow Lab ID:	1274857002	Collected	d: 09/14/16	8 08:40	Received: 09/	14/16 17:35 Ma	atrix: Water	
Sample: WS-003 Thickner Over	rflow Lab ID:	1274857002		d: 09/14/16	8 08:40	Received: 09/	14/16 17:35 Ma	atrix: Water	
Sample: WS-003 Thickner Over Parameters	rflow Lab ID:	1274857002 Units	Collected Report Limit	MDL	08:40 DF	Received: 09/	14/16 17:35 Ma	atrix: Water CAS No.	Qual
Parameters	Results		Report Limit	MDL	DF	Prepared			Qual
Parameters 200.7 MET ICP, Lab Filtered	Results	Units	Report Limit	MDL	DF	Prepared		CAS No.	Qual
Parameters 200.7 MET ICP, Lab Filtered Calcium, Dissolved	Results	Units Method: EPA 2	Report Limit 200.7 Prepa	MDL ration Meth	DF nod: EP/	Prepared A 200.7	Analyzed	CAS No.	Qual
Parameters 200.7 MET ICP, Lab Filtered Calcium, Dissolved Magnesium, Dissolved	Results Analytical	Units Method: EPA 2 mg/L	Report Limit 200.7 Prepa	MDL ration Meth	DF nod: EP/	Prepared A 200.7 09/15/16 16:57	Analyzed 09/16/16 13:38	CAS No.	Qual
·	Results Analytical 765 99.9 2320	Units Method: EPA 2 mg/L mg/L	Report Limit 200.7 Prepa 5.0 5.0 100	MDL ration Meth 0.29 0.67	DF nod: EP/ 10 10	Prepared A 200.7 09/15/16 16:57 09/15/16 16:57	Analyzed 09/16/16 13:38 09/16/16 13:38	CAS No.	Qual

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QUALITY CONTROL DATA

EPA 200.7

Project: NPDES-Line 3 Wkly

Pace Project No.: 1274857

Date: 09/19/2016 04:42 PM

QC Batch: 94345 Analysis Method:

QC Batch Method: EPA 200.7 Analysis Description: 200.7 MET Dissolved

Associated Lab Samples: 1274857001, 1274857002

METHOD BLANK: 371416 Matrix: Water

Associated Lab Samples: 1274857001, 1274857002

Blank Reporting Limit MDL Qualifiers Parameter Result Analyzed Units Calcium, Dissolved mg/L ND 0.50 0.029 09/16/16 12:33 Magnesium, Dissolved mg/L ND 0.50 0.067 09/16/16 12:33

LABORATORY CONTROL SAMPLE: 371417

		Spike	LCS	LCS	% Rec	
Parameter	Units	Conc.	Result	% Rec	Limits	Qualifiers
Calcium, Dissolved	mg/L	50	51.6	103	85-115	
Magnesium, Dissolved	mg/L	50	50.7	101	85-115	

MATRIX SPIKE & MATRIX SPI	KE DUPLIC	CATE: 37141	8		371419							
			MS	MSD								
		1274854001	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Calcium, Dissolved	mg/L	84.8	50	50	135	135	99	100	70-130	0	20	
Magnesium, Dissolved	mg/L	328	50	50	372	375	87	94	70-130	1	20	

MATRIX SPIKE & MATRIX SPIR	KE DUPLIC	CATE: 37143	1		371432							
			MS	MSD								
		1274854010	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Calcium, Dissolved	mg/L	64.4	50	50	115	117	101	106	70-130	2	20	
Magnesium, Dissolved	mg/L	148	50	50	196	200	95	103	70-130	2	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

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QUALITY CONTROL DATA

Project: NPDES-Line 3 Wkly

Pace Project No.: 1274857

Date: 09/19/2016 04:42 PM

QC Batch: 94336 Analysis Method: EPA 300.0

QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions

Associated Lab Samples: 1274857001, 1274857002

METHOD BLANK: 371335 Matrix: Water

Associated Lab Samples: 1274857001, 1274857002

Blank Reporting
Parameter Units Result Limit MDL Analyzed Qualifiers

Sulfate mg/L ND 2.0 1.0 09/15/16 14:11

LABORATORY CONTROL SAMPLE: 371336

Spike LCS LCS % Rec Parameter Units Conc. Result % Rec Limits Qualifiers Sulfate mg/L 50 51.8 104 90-110

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 371337 371338

MS MSD 1274847001 Spike Spike MS MSD MS MSD % Rec Max Parameter Units Result Conc. Conc. Result Result % Rec % Rec Limits RPD RPD Qual Sulfate 250 672 90-110 0 20 mg/L 412 250 673 104 104

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 371339 371340

MS MSD MS MS 1274854006 Spike Spike MSD MSD % Rec Max Limits RPD Parameter Units Result Conc. Conc. Result Result % Rec % Rec RPD Qual Sulfate 1380 500 500 1890 1880 103 100 90-110 1 20 mg/L

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



QUALIFIERS

Project: NPDES-Line 3 Wkly

Pace Project No.: 1274857

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

Date: 09/19/2016 04:42 PM

PASI-V Pace Analytical Services - Virginia





QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: NPDES-Line 3 Wkly

Pace Project No.: 1274857

Date: 09/19/2016 04:42 PM

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
1274857001 1274857002	WS-002 Scrubber Make-Up WS-003 Thickner Overflow	EPA 200.7 EPA 200.7	94345 94345	EPA 200.7 EPA 200.7	94416 94416
1274857001 1274857002	WS-002 Scrubber Make-Up WS-003 Thickner Overflow	EPA 300.0 EPA 300.0	94336 94336		

Section A

Required Client Information;

Required Project Information:

ddress

ITEM#

company.

CHAIN-OF-CUSTODY / Anal WO#: 1274857

Invoice Information:

Section C

PM: MMW

CLIENT: USS CORP Due Date: 09/29/16

렃

Requested Due Date Iron, MN 55768 WS-002 Scrubber Make-Up WS-003 Thickner Overflow USS Corporation P.O. Box 417 Sample Ids must be unique One Character per box. (A-Z, 0-9 / , -) SAMPLE ID Fax MATRIX
Drinkling Water
Water
Waste Water
Product
Soil/Solid
Oil
Wipe
Air
Other Report To: Copy To: Project # Project Name: Purchase Order #: CODE DW WIT WIT WITH ARREST OF ARRES RELINQUISHED BY TAFFILIATION Tom Moe ¥ TW MATRIX CODE (see valid codes to left) Condition SAMPLE TYPE (G=GRAB C=COMP) NPDES-LINE 3 Wkly 31.80 31.416 01.80 94.11 97476 08:50 97476 08:50 START SAMPLER NAME AND SIGNATURE TIME SIGNATURE of SAMPLER: PRINT Name of SAMPLER: LECTED DATE END 27475 DATE SAMPLE TEMP AT COLLECTION # OF CONTAINERS Pace Profile # Pace Project Manager: Pace Quote: Address Company Name Attention: 535 9 INC. "and work la Unpreserved Kendnews H2SO4 HNO3 reservatives HCI heather.zika@pacelabs.com OCEPTED BY J AFFILIATION Na2S2O3 milles Methanol Analyses Test Y/N LAB FILTERED: SO4 DATE Signed: Lab FILTERED: Ca,Mg,Har 9/14/1/ DATE TIME ω TEMP in C Residual Chlorine (Y/N) Received on SAMPLE CONDITIONS LF,LF (Y/N) Custody Sealed Cooler (Y/N) Samples Intact (Y/N)

2 4 6 9

Pace Analytical

Document Name:

Sample Condition Upon Receipt Form

Document Revised: 23Feb2015 Page 1 of 1

Issuing Authority:

Document No.: F-VM-C-001-Rev.09

Pace Virginia, Minnesota Quality Office

LSS CoRP Courier: Fed Ex	
Courier: Fed Ex	
Tracking Number: Custody Seal on Cooler/Box Present? Packing Material: Bubble Wrap Bubble Bags None Other: Temp Blank? Yesternometer Used: 140792808 Type of Ice: Wet Blue None Samples on ice, cooling processor Samples on Ice, cooling processor Yesternometer Used: 140792808 Type of Ice: Wet Blue None Samples on ice, cooling processor Yesternometer Used: 140792808 Type of Ice: Wet Blue None Samples on ice, cooling processor Yesternometer Used: 140792808 Type of Ice: Wet Blue None Samples on ice, cooling processor Yesternometer Used: 140792808 Type of Ice: Wet Blue None Samples on ice, cooling processor Yesternometer Used: 140792808 Yesternometer Used: 140792808 Yesternometer Used: 140792808 Type of Ice: Wet Blue None Samples on ice, cooling processor Yesternometer Used: 140792808 Type of Ice: Wet Blue None Samples on ice, cooling processor Yesternometer Used: 140792808 Type of Ice: Wet Blue None Samples on ice, cooling processor Yesternometer Used: 140792808 Type of Ice: Wet 140792808 Type of Ice: Temp Blank? Yes No N/A 1.	
Acking Material: Bubble Wrap Bubble Bags None Other: Temp Blank? Yes Bears Intact? Wes None Samples on ice, cooling processor of the Cooler Temp Read °C: 3.2 Cooler Temp Corrected °C: 5 Biological Tissue Frozen? Yes Mps should be above freezing to 6°C Correction Factor: 6°C	
Type of Ice: Wet Blue None Samples on Ice, cooling proceed of the cooling process o	
Cooler Temp Read °C: 3.2 Cooler Temp Corrected °C: 5 Date and Initials of Person Examining Contents: Comments: Comme	es No
Cooler Temp Read °C: 3.2 Cooler Temp Corrected °C: Correction Factor: Date and Initials of Person Examining Contents: Comments: Comments	ocess has begu
Chain of Custody Filled Out? Chain of Custody Relinquished? Sampler Name and Signature on COC? Syes No NA 4. Samples Arrived within Hold Time? Short Hold Time Analysis (<72 hr)? Rush Turn Around Time Requested? Yes No NA 7. Sufficient Volume? Yes No NA 8. Correct Containers Used?	□NO \$1 01 9-15
Chain of Custody Relinquished? Sampler Name and Signature on COC? Yes No N/A 4. Samples Arrived within Hold Time? Yes No N/A 5. Short Hold Time Analysis (<72 hr)? Yes No N/A 6. Rush Turn Around Time Requested? Yes No N/A 7. Sufficient Volume? Yes No N/A 8. Correct Containers Used?	
Sampler Name and Signature on COC? Yes No N/A 4. Samples Arrived within Hold Time? Yes No N/A 5. Short Hold Time Analysis (<72 hr)?	
Samples Arrived within Hold Time?	
Short Hold Time Analysis (<72 hr)? Yes No N/A 6. Rush Turn Around Time Requested? Yes No N/A 7. Sufficient Volume? Yes No N/A 8. Correct Containers Used? Yes No N/A 9.	
Rush Turn Around Time Requested? Yes No N/A 7. Sufficient Volume? Yes No N/A 8. Correct Containers Used? Yes No N/A 9.	
Correct Containers Used? Yes No N/A 8. Yes No N/A 9.	
orrect Containers Used?	
'A '	
'A	
ontainers Intact? No N/A 10.	
iltered Volume Received for Dissolved Tests? Yes No 11. Note if sediment is visible in the dissolved contained.	ers.
ample Labels Match COC? Yes No N/A 12.	
-Includes Date/Time/ID/Analysis Matrix:	
Il containers needing acid/base preservation will be Yes No N/A See pH log for results and additional preserved and documentation	eservation
eads pace in Methyl Mercury Container	
eads pace in VOA Vials (>6mm)?	
rip Blank Present? Yes No No 15.	
rip Blank Custody Seals Present? Yes No M/A	
ENT NOTIFICATION/RESOLUTION Field Data Required? Yes [□No
Person Contacted: Date/Time: Comments/Resolution:	
Comments/Resolution:	
	<u></u>
CAL WAIVER ON FILE Y N TEMPERATURE WAIVER ON FILE Y N	
ject Manager Review: All Lie Alls Ods) Date: 9/15/(0	

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

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